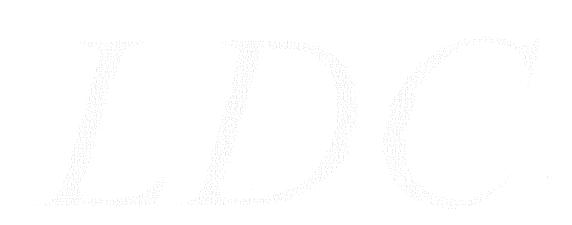
Ballfields Parcels at DoDHF Novato, CA Data Validation Reports LDC# 13575

Gasoline Range Organics



Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Ballfields Parcels at DoDHF Novato, CA

Collection Date: April 6, 2005

LDC Report Date: June 14, 2005

Matrix: Soil

Parameters: Gasoline Range Organics

Validation Level: NFESC Level III

Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K2502497

Sample Identification

TO63-R2-SB04-0-0.5 TO63-R2-SB02-0-0.5MS TO63-R2-SB04-3-4 TO63-R2-SB02-0-0.5MSD

TO63-R2-SB01-0-0.5

TO63-R2-SB01-0-0.5 Dup

TO63-R2-SB01-1-2

TO63-R1-SB04-0-0.5

TO63-R1-SB04-4-5

TO63-R1-SB01-0-0.5

TO63-R1-SB03-0-0.5

TO63-R1-SB03-4-5

TO63-R4-SB04-0-0.5

TO63-R4-SB04-4-5

TO63-R5-SB04-0-0.5

TO63-R5-SB04-5-6

TO63-R5-SB02-0-0.5

TO63-R5-SB02-3-4

TO63-R5-SB01-0-0.5

TO63-R5-SB03-0-0.5

TO63-R2-SB03-0-0.5

TO63-R2-SB02-0-0.5

Introduction

This data review covers 22 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 for Gasoline Range Organics.

The review follows the Final Sampling and Analysis Plan for Preliminary Assessment/Site Investigation of Ballfields Parcels at DoDHF Novato, California, (March 23, 2005) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

The percent difference (%D) of the second source calibration standard were less than or equal to 15.0% for all compounds.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No gasoline range organic contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
KWG0505640-4	4/11/05	Gasoline range organics	1.5 mg/Kg	All samples in SDG K2502497

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration	
TO63-R2-SB04-0-0.5	Gasoline range organics	0.89 mg/Kg	2.5U mg/Kg	
TO63-R2-SB04-3-4	Gasoline range organics	1.8 mg/Kg	5.1U mg/Kg	

Sample	Compound	Reported Concentration	Modified Final Concentration
TO63-R2-SB01-0-0.5	Gasoline range organics	1.1 mg/Kg	3.4U mg/Kg
TO63-R2-SB01-0-0.5 Dup	Gasoline range organics	1.1 mg/Kg	3.0U mg/Kg
TO63-R2-SB01-1-2	Gasoline range organics	1.4 mg/Kg	4.7U mg/Kg
TO63-R1-SB04-0-0.5	Gasoline range organics	1.1 mg/Kg	2.9U mg/Kg
TO63-R1-SB04-4-5	Gasoline range organics	1.5 mg/Kg	4.9U mg/Kg
TO63-R1-SB03-0-0.5	Gasoline range organics	1.1 mg/Kg	2.7U mg/Kg
TO63-R1-SB03-4-5	Gasoline range organics	1.2 mg/Kg	4.0U mg/Kg
TO63-R4-SB04-4-5	Gasoline range organics	1.4 mg/Kg	4.6U mg/Kg
TO63-R5-SB04-5-6	Gasoline range organics	1.6 mg/Kg	4.3U mg/Kg
TO63-R5-SB02-3-4	Gasoline range organics	1.5 mg/Kg	4.8U mg/Kg
TO63-R5-SB01-0-0.5	Gasoline range organics	0.91 mg/Kg	2.8U mg/Kg
TO63-R5-SB03-0-0.5	Gasoline range organics	0.84 mg/Kg	2.5U mg/Kg
TO63-R2-SB03-0-0.5	Gasoline range organics	1.3 mg/Kg	3.2U mg/Kg
TO63-R2-SB02-0-0.5	Gasoline range organics	1.5 mg/Kg	4.2U mg/Kg

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

Samples TO63-R2-SB01-0-0.5 and TO63-R2-SB01-0-0.5 Dup and samples TO63-R1-SB01-0-0.5 and TO63-R1-SB01-0-0.5Dup (from SDG K2502499) were identified as field duplicates. No gasoline range organics were detected in any of the samples with the following exceptions:

	Concentra		
Compound	TO63-R2-SB01-0-0.5	TO63-R2-SB01-0-0.5 Dup	RPD
Gasoline range organics	1.1	1.1	0

	Concentra		
Compound	TO63-R1-SB01-0-0.5	TO63-R1-SB01-0-0.5 TO63-R1-SB01-0-0.5Dup	
Gasoline range organics	2.4U	1.0	200

X. Field Blanks

No field blanks were identified in this SDG.

Ballfields Parcels at DoDHF Novato, CA Gasoline Range Organics - Data Qualification Summary - SDG K2502497

No Sample Data Qualified in this SDG

Ballfields Parcels at DoDHF Novato, CA Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG K2502497

SDG	Sample	Compound	Modified Final Concentration	A or P
K2502497	TO63-R2-SB04-0-0.5	Gasoline range organics	2.5U mg/Kg	А
K2502497	TO63-R2-SB04-3-4	Gasoline range organics	5.1U mg/Kg	А
K2502497	TO63-R2-SB01-0-0.5	Gasoline range organics	3.4U mg/Kg	А
K2502497	TO63-R2-SB01-0-0.5 Dup	Gasoline range organics	3.0U mg/Kg	А
K2502497	TO63-R2-SB01-1-2	Gasoline range organics	4.7U mg/Kg	А
K2502497	TO63-R1-SB04-0-0.5	Gasoline range organics	2.9U mg/Kg	А
K2502497	TO63-R1-SB04-4-5	Gasoline range organics	4.9U mg/Kg	А
K2502497	TO63-R1-SB03-0-0.5	Gasoline range organics	2.7U mg/Kg	А
K2502497	TO63-R1-SB03-4-5	Gasoline range organics	4.0U mg/Kg	Α
K2502497	TO63-R4-SB04-4-5	Gasoline range organics	4.6U mg/Kg	А
K2502497	TO63-R5-SB04-5-6	Gasoline range organics	4.3U mg/Kg	А
K2502497	TO63-R5-SB02-3-4	Gasoline range organics	4.8U mg/Kg	А
K2502497	TO63-R5-SB01-0-0.5	Gasoline range organics	2.8U mg/Kg	А
K2502497	TO63-R5-SB03-0-0.5	Gasoline range organics	2.5U mg/Kg	А
K2502497	TO63-R2-SB03-0-0.5	Gasoline range organics	3.2U mg/Kg	А
K2502497	TO63-R2-SB02-0-0.5	Gasoline range organics	4.2U mg/Kg	А

Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R2-SB04-0-0.5

Lab Code:

K2502497-001

Extraction Method:

EPA 5035/5030B

Analysis Method:

Analyte Name

8015B

Units: mg/Kg

Basis: Dry

Level: Med

MRL

MDL

Dilution **Factor**

Date Extracted 04/08/05

Date Analyzed Extraction

Note Lot

Gasoline Range Organics (GRO)

0.89 J 2.5U

0.81

Date

KWG0505640 04/11/05

Surrogate Name

4-Bromofluorobenzene

Control Limits %Rec 25-133

81

Analyzed

04/11/05

Note Acceptable

Comments:

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005 Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R2-SB04-3-4

Lab Code:

K2502497-002

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

Analyte Name Gasoline Range Organics (GRO) Result Q

MDL MRL

Dilution **Factor**

Date Extracted 04/08/05

Date Analyzed

Extraction Note Lot

1.8 J 5.1U 5.1 1.3

04/11/05

KWG0505640

Surrogate Name 4-Bromofluorobenzene

Control Limits %Rec 58 25-133

Date Analyzed 04/11/05

Acceptable

Note

Comments:

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Analytical Results

Client: Project: Battelle Memorial Institute Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005 Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R2-SB01-0-0.5

Lab Code:

K2502497-003

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

Extraction Date Date Dilution MDL **Factor** Extracted Analyzed Lot Note MRL **Analyte Name** KWG0505640 04/11/05 1.1 J 3,4U 04/08/05 1.1 Gasoline Range Organics (GRO)

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	85	25-133	04/11/05	Acceptable

Comments:

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SuperSet Reference:

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R2-SB01-0-0.5 DUP

Lab Code:

K2502497-004

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

Analyte Name Gasoline Range Organics (GRO) Result Q 1.1 J 3,0U

MRL 3.0

MDL 1.1

Dilution **Factor**

Extracted 04/08/05

Date

Date Analyzed 04/11/05

Extraction Note Lot KWG0505640

Surrogate Name

4-Bromofluorobenzene

Control %Rec Limits 25-133 78

Date Analyzed 04/11/05

Note

Acceptable

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R2-SB01-1-2

Lab Code:

K2502497-005

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

				Dilution	Date	Date	Extraction		
Analyte Name	Result Q	MRL	MDL	Factor	Extracted	Analyzed	Lot	Note	
Gasoline Range Organics (GRO)		4.7	1.1	1	04/08/05	04/11/05	KWG0505640		

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	69	25-133	04/11/05	Acceptable

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R1-SB04-0-0.5

Lab Code:

K2502497-006

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

Auralista Noma	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Analyte Name Gasoline Range Organics (GRO)	1.1 J 2.9U	2.9	0.81	1	04/08/05	04/11/05	KWG0505640	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	84	25-133	04/11/05	Acceptable

Comments:

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005 Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R1-SB04-4-5

Lab Code:

K2502497-007

Extraction Method: Analysis Method:

Surrogate Name

4-Bromofluorobenzene

EPA 5035/5030B

8015B

Units: mg/Kg Basis: Dry

Level: Med

Analyte Name Gasoline Range Organics (GRO) MRL

Control

Limits

25-133

%Rec

65

MDL 1.3

Factor Extracted 04/08/05 1

Date

Dilution

Date Analyzed 04/11/05

Extraction

Note Lot KWG0505640

Date Analyzed

04/11/05

Note

Acceptable

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R1-SB01-0-0.5

Lab Code:

K2502497-008

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

Date Date **Extraction** Dilution Lot Note MRL MDL **Factor** Extracted Analyzed Result Q **Analyte Name** KWG0505640 04/11/05 04/08/05 0.80 1 Gasoline Range Organics (GRO) ND U 2.4

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
4-Bromofluorobenzene	75	25-133	04/11/05	Acceptable	

Comments:

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005 Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R1-SB03-0-0.5

Lab Code:

K2502497-009

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

Analyte Name

1.1 J 2.74

MDL 0.88

Dilution Factor 1

Date Extracted 04/08/05

Date Analyzed **Extraction** Lot

Note

Gasoline Range Organics (GRO)

04/11/05

KWG0505640

Surrogate Name 4-Bromofluorobenzene %Rec 77

Control Limits 25-133

Date Analyzed 04/11/05

Acceptable

Note

Comments:

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R1-SB03-4-5

Lab Code:

K2502497-010

Extraction Method: Analysis Method:

EPA 5035/5030B

8015B

Units: mg/Kg Basis: Dry

Level: Med

Extraction Dilution Date Date **Extracted**

Analyte Name

Result Q **MRL**

Control

Limits

Factor MDL 1.2 1

04/08/05

Analyzed KWG0505640 04/11/05

Note Lot

Gasoline Range Organics (GRO)

Date

Note

4-Bromofluorobenzene

Surrogate Name

25-133 61

%Rec

Analyzed 04/11/05

Acceptable

Comments:

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Analytical Results

Client: Battelle Memorial Institute
Project: Novato Ballfields/G486063

Sample Matrix: Soil

Service Request: K2502497

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R4-SB04-0-0.5

Lab Code:

K2502497-011

Extraction Method:

EPA 5035/5030B

Units: mg/Kg
Basis: Dry

Level: Med

Analysis Method: 8015B

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	MRL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline Range Organics (GRO)	ND U	2.2	0.81	1	04/08/05	04/11/05	KWG0505640	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
4-Bromofluorobenzene	76	25-133	04/11/05	Acceptable	

Comments:

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005 Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R4-SB04-4-5

Lab Code:

K2502497-012

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

Extraction

Analyte Name Gasoline Range Organics (GRO) Result Q **MRL** 1.4 J 4,64

25-133

MDL 1.2

Dilution Factor

Date Extracted 04/08/05

Date Analyzed 04/11/05

Lot Note KWG0505640

Surrogate Name

4-Bromofluorobenzene

Control %Rec Limits

74

Date Analyzed 04/11/05

Note

Acceptable

Comments:

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R5-SB04-0-0.5

Lab Code:

K2502497-013

Extraction Method: Analysis Method:

EPA 5035/5030B

8015B

Units: mg/Kg Basis: Dry

Level: Med

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	MRL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline Range Organics (GRO)	ND U	2.3	0.80	1	04/08/05	04/11/05	KWG0505640	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
4-Bromofluorobenzene	78	25-133	04/11/05	Acceptable	

Comments:

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Form 1A - Organic

RR47090 SuperSet Reference:

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R5-SB04-5-6

Lab Code:

K2502497-014

Extraction Method: Analysis Method:

EPA 5035/5030B

8015B

Units: mg/Kg

Basis: Dry

Level: Med

				Dilution	Date	Date	Extraction	***
Analyte Name	Result Q	MRL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline Range Organics (GRO)	1.6 J 4,3	3U 4.3	1.3	1	04/08/05	04/11/05	KWG0505640	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
4-Bromofluorobenzene	71	25-133	04/11/05	Acceptable	

Comments:

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SuperSet Reference:

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R5-SB02-0-0.5

Lab Code:

K2502497-015

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

				Dilution	Date	Date	Extraction	35.7 ./
Analyte Name	Result Q	MRL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline Range Organics (GRO)	ND U	2.4	0.81	1	04/08/05	04/11/05	KWG0505640	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	80	25-133	04/11/05	Acceptable

Comments:

Printed: 04/15/2005 10:31:02

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Form 1A - Organic

SuperSet Reference:

Page 1 of 1

Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R5-SB02-3-4

Lab Code:

K2502497-016

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

Date Date

Analyte Name

Result Q

MRL 1.5 J 4,8U

Factor MDL

Dilution

Extracted

Analyzed

Extraction Lot

1.3

04/08/05

04/11/05

Note

Gasoline Range Organics (GRO)

4.8

KWG0505640

Surrogate Name 4-Bromofluorobenzene %Rec 71

Control Limits 25-133

Date Analyzed 04/11/05

Note

Acceptable

Comments:

Printed: 04/15/2005 10:31:03

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Form 1A - Organic

SuperSet Reference:

Page 1 of 1

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RR47090

Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005 **Date Received:** 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R5-SB01-0.0.5

Lab Code:

K2502497-017

Basis: Dry

Units: mg/Kg

Level: Med

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

				Dilution	Date	Date	Extraction	Note
Analyte Name	Result Q	MRL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline Range Organics (GRO)	0.91 J 2.8U	2.8	0.88	1	04/08/05	04/11/05	KWG0505640	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
4-Bromofluorobenzene	73	25-133	04/11/05	Acceptable	

Comments:

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Form 1A - Organic

SuperSet Reference:

Page

1 of 1

Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005 Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R5-SB03-0.0.5

Lab Code:

K2502497-018

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

Analyte Name

Result Q

MRL

MDL

Dilution **Factor**

Date Extracted 04/08/05

Date Analyzed **Extraction** Lot Note

Gasoline Range Organics (GRO)

0.84 J 2,5 4

0.78

04/11/05

KWG0505640

Surrogate Name 4-Bromofluorobenzene

Control %Rec Limits 25-133 76

Date Analyzed 04/11/05

Note

Acceptable

Comments:

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Form 1A - Organic

SuperSet Reference:

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Page

RR47090

Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497 Date Collected: 04/06/2005

Units: mg/Kg

Basis: Dry

Level: Med

Note

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R2-SB03-0.0.5

Lab Code:

K2502497-019

Extraction Method: Analysis Method:

EPA 5035/5030B

8015B

Date Date **Extraction** Dilution Lot Analyzed MRL MDL **Factor** Extracted Result Q

Analyte Name KWG0505640 04/11/05 04/08/05 1 1.3 J 3, 2 U 1.1 Gasoline Range Organics (GRO)

Control Date %Rec Limits Analyzed Note Surrogate Name 25-133 04/11/05 Acceptable 71 4-Bromofluorobenzene

Comments:

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Form 1A - Organic

SuperSet Reference:

Page l of l

740

Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502497

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R2-SB02-0.0.5

Lab Code:

K2502497-020

Extraction Method: Analysis Method:

EPA 5035/5030B

8015B

Units: mg/Kg Basis: Dry

Level: Med

Analyte Name

MRL

MDL

Dilution **Factor**

Date Extracted

Date Analyzed

Extraction Note

Gasoline Range Organics (GRO)

1.5 J 4,2U

1.2

04/08/05

04/12/05

Lot KWG0505640

Surrogate Name

4-Bromofluorobenzene

Control %Rec Limits 25-133 59

Result Q

Date Analyzed 04/12/05

Note

Acceptable

Comments:

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Form 1A - Organic

1 of 1

SuperSet Reference:

RR47090

Page

SDG	#:13575A7 #:K2502497 ratory:_Columbia Analytic					TEN el III	ESS WORKSHEET		Date: 6/13/05 Page: 1/0f Reviewer: 2 2nd Reviewer: 6
MET	HOD: GC Gasoline Rang	e Orç	ganics (EPA	SW 846 N	Vleth	od 80	015)		
	samples listed below were ation findings worksheets		ewed for ea	ch of the fo	ollow	ring v	alidation areas. Validatio	on fin	idings are noted in attached
	Validation	Area					Comm	ents	
1.	Technical holding times			A	Sam	pling o	dates: 4/6/06	, S-	
lla.	Initial calibration			4			, , , , , , , , , , , , , , , , , , ,		
IIb.	Calibration verification			A	70	, D	&ICV		
111.	Blanks			w					
IVa.	Surrogate recovery			A					
IVb.	Matrix spike/Matrix spike du	plicate	es	A					
IVc.	Laboratory control samples			A		10			
V.	Target compound identification N								
VI.									
VII.	System Performance N							•	
VIII.	Overall assessment of data			#					
IX.	Field duplicates			w	D	- 3	3+4. 8+T063+	<u> </u>	5B01-0-0.5 DUP 16 x0249
X.	Field blanks			N					
	A = Acceptable N = Not provided/applicable SW = See worksheet ted Samples:)	R = Rin	o compounds sate eld blank	s dete	cted	D = Duplicate TB = Trip blank EB = Equipment blan	k	
1	TO63-R2-SB04-0-0.5	11	TO63-R4-SB0	04-0-0.5		21	TO63-R2-SB02-0-0.5MS	31	
2	TO63-R2-SB04-3-4	12	TO63-R4-SB0)4-4-5		22	TO63-R2-SB02-0-0.5MSD	32	
3	TO63-R2-SB01-0-0.5	13	TO63-R5-SB0	04-0-0.5		23	KW40505640-4	33	
4	TO63-R2-SB01-0-0.5 Dup	14	TO63-R5-SB0)4-5-6		24		34	
5	TO63-R2-SB01-1-2	15	TO63-R5-SB0	02-0-0.5		25		35	
6	TO63-R1-SB04-0-0.5	16	TO63-R5-SB0)2-3-4		26		36	
7	TO63-R1-SB04-4-5	17	TO63 R5 SB0	01-0-0.5		27		37	
8	TO63-R1-SB01-0-0.5	18	TO63-R5-SB0	3-0-0.5		28		38	
9	TO63-R1-SB03-0-0.5	19	TO63-R2-SB0	3-0-0.5		29		39	
10	TO63-R1-SB03-4-5	20	TO63-R2-SB0	2-0-0.5		30		40	

Notes:_

LDC#: 135/347 SDG#: K>SD447

VALIDATION FINDINGS WORKSHEET

7 of 7	7	Y
Page:	Reviewer:	2nd Reviewer:

I I I	
SC HPC	
>	
METHOD:	

		1		1.5/4912		
				1.1/2.94	_	
; performed?		(5	1.4/4.74		
e identified as "N/A". xtraction procedure was ndings below. hour batch? samples? Associated samples:	Sample Identification	*	+	1.1/30 1		
restions are ident sample extractic ase see findings h each 24 hour b ttch of ≤20 samp	Ö		η	1.1/3.441.	\	
Not applicable quod blank? c and whenever a action batch? anks? If yes, ple lank analyzed with extraction batch?			assachen	1.8/6.14	,	
fications below for all questions answered "N". Not applicable questions are identified as "N/A". Were all samples associated with a given method blank? Was a method blank performed for each matrix and whenever a sample extraction procedure was performed? Were any contaminants found in the method blanks? If yes, please see findings below. (Gasoline and aromatics only)Was a method blank analyzed with each 24 hour batch? Was a method blank analyzed for each analytical / extraction batch of ≤20 samples? Associated samples:			/	NSC/680	, /	
ow for all question ples associated of blank performe od blank performe intaminants found ard aromatics only od blank analyze	Cl Angle	Dialin iD	-m/60505640-14	51	description of the second seco	
only only actio)	Compound	tule/			THE PERSONNEL PROPERTY OF THE PERSONNEL PROP
Y N N/A Slank extractio				088		

Blank extraction date:	Blank ar	Blank analysis date:		Asso	Associated samples:				
Conc. units:	The state of the s								AND THE PROPERTY OF THE PROPER
400	Olyack ID			•	Sample Identification	2			
Compound	Digital 5		*		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1 1	D' X-	20	
AN V	4-04050 SMS	<i>∨</i>	(0	_	(e)				
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		EN OF LOGIC TON SE IL ISSUE 1 IN	DE OLIVI IFIED BY THE	EN WEDE OF A REFER BY THE FOL OWING STATEMENT:	AENT:				

Associated samples:__

ALL CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT: All contaminants within five times the method blank concentration were qualified as not detected, "U".

LDC#: 35567 SDG#: 12522497

VALIDATION FINDINGS WORKSHEET Field Duplicates

Page: __of__ Reviewer: 2nd reviewer:

METHOD: VGC HPLC

Y N N/A Were field duplicate pairs identified in this SDG?

Y N N/A Were target compounds detected in the field duplicate pairs?

		•		
	Concentration (145)	ms/)	%RPD	Qualification Parent only / All Samples
Compound	W	7	Limit s	
	. /	1.1	0	облага в дома в водово усточно водово водо водово водово водово водово водо водово вод
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				окольнойна радили манажения постанування выполняться постанування постанування выполняться выполняться постану
				ALIBORANI PROGRAMA PROGRAMA PROGRAMA POR POR PROGRAMA POR PROGRAMA POR PROGRAMA POR PROGRAMA POR PROGRAMA POR
	Concentration (M. 2)	(M2K)	%RPD	Qualification
Compound		0	Limit s	Parent only / All Samples
	%	T063-R1-5B01-0-05/DUP	And	
#XC	N4.0	0.1	200	
				ления в передели в предели в передели в перед
				основной принципальной принципальной принципальной принципальной принципальной принципальной принципальной при

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Ballfields Parcels at DoDHF Novato, CA

Collection Date: April 6, 2005

LDC Report Date: June 14, 2005

Matrix: Soil

Parameters: Gasoline Range Organics

Validation Level: NFESC Level III

Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K2502499

Sample Identification

TO63-R1-SB02-0-0.5 TO63-R1-SB01-0-0.5Dup

Introduction

This data review covers 2 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 for Gasoline Range Organics.

The review follows the Final Sampling and Analysis Plan for Preliminary Assessment/Site Investigation of Ballfields Parcels at DoDHF Novato, California, (March 23, 2005) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

The percent difference (%D) of the second source calibration standard were less than or equal to 15.0% for all compounds.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No gasoline range organic contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
KWG0505639-4	4/14/05	Gasoline range organics	0.94 mg/Kg	All samples in SDG K2502499

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
TO63-R1-SB02-0-0.5	Gasoline range organics	1.1 mg/Kg	3.3U mg/Kg
TO63-R1-SB01-0-0.5Dup	Gasoline range organics	1.0 mg/Kg	3.3U mg/Kg

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

b. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

c Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

Samples TO63-R1-SB01-0-0.5Dup and TO63-R1-SB01-0-0.5 (from SDG K2502497) were identified as field duplicates. No gasoline range organics were detected in any of the samples with the following exceptions:

	Concentrat	ion (mg/Kg)	
Compound	TO63-R5-SB03-0-0.5Dup	TO63-R5-SB03-0-0.5	RPD
Gasoline range organics	1.0	2.4U	200

X. Field Blanks

No field blanks were identified in this SDG.

Ballfields Parcels at DoDHF Novato, CA Gasoline Range Organics - Data Qualification Summary - SDG K2502499

No Sample Data Qualified in this SDG

Ballfields Parcels at DoDHF Novato, CA Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG K2502499

SDG	Sample	Compound	Modified Final Concentration	A or P
K2502499	TO63-R1-SB02-0-0.5	Gasoline range organics	3.3U mg/Kg	А
K2502499	TO63-R1-SB01-0-0.5Dup	Gasoline range organics	3.3U mg/Kg	А

Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502499

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

T063-R1-SB02-0-0.5

Lab Code:

K2502499-011

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	MRL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline Range Organics (GRO)	1.1 J 3,3	U 3.3	0.83	1	04/08/05	04/14/05	KWG0505639	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
4-Bromofluorobenzene	70	25-133	04/14/05	Acceptable	

Comments:

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Form 1A - Organic

SuperSet Reference: R

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502499

Date Collected: 04/06/2005 Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

T063-R1-SB01-0-0.5 DUP

75

Lab Code:

K2502499-012

Extraction Method:

EPA 5035/5030B

Analysis Method:

4-Bromofluorobenzene

8015B

Units: mg/Kg

Basis: Dry

Level: Med

Analyte	Name		
Gasoline	Range	Organics	(GRO)

1.0 J 3.3 U

25-133

MDL 0.90

Dilution

Factor

1

Date Date Extracted Analyzed 04/14/05 04/08/05

Extraction

Note Lot KWG0505639

S. A. Maria	%Rec	Control Limits	Date Analyzed	Note
Surrogate Name	/UICC		Milaryzea	
4 Day and officer change one	75	25-133	04/14/05	Acceptable

Comments:

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Form 1A - Organic

SuperSet Reference:

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SDG ; Labor MET H	#: 13575B7 #: K2502499 atory: Columbia Analytic HOD: GC Gasoline Rangamples listed below were tion findings worksheets	cal Se	<u>rvices</u> ganics (EPA	SW 846	Level III	015)		Pate: <u>6/3/es</u> Page: <u>/of /</u> Reviewer: 2nd Reviewer: <u>9</u> Ings are noted in attached
	Validation	ı Area					Comments	
I	Technical holding times			A	Sampling	dates: 4/4	4/05	
lla.	Initial calibration			4			7	
IIb.	Calibration verification			A	709	LIW		
111.	Blanks			W				
IVa.	Surrogate recovery			A				
IVb.	Matrix spike/Matrix spike d	uplicate	es	l N	- li-e	of spe	itied	
IVc.	Laboratory control samples	3		A	20	S		
V.	Target compound identifica	ation		N				
VI.	Compound Quantitation an	d CRQ	Ls	N				
VII.	System Performance			N	_			
VIII.	Overall assessment of data	<u> </u>		<u> </u>				
IX.	Field duplicates			W	D =1	+= 2+	-T063-R1-5B0	01-0-0.5 (KX50244
X	Field blanks							
Note: Validate	A = Acceptable N = Not provided/applicabl SW = See worksheet ed Samples:	е	R = Rin	o compound sate eld blank	is detected	TB = 7	uplicate Frip blank Equipment blank	
1 ,	TO63-R1-SB02-0-0.5	11	KW4050	5639-4	21		31	
2	TO63-R1-SB01-0-0.5Dup	12	1		22		32	
3		13			23		33	
4		14			24		34	
5		15			25		35	
6		16			26	-	36	
7		17			27		37	
8		18			28		38	
9		19			29		39	
10		20			30		40	

Notes:__

SDG #: 42502499 LDC#: [85/28]

VALIDATION FINDINGS WORKSHEET Blanks

20t/	4	Janes -
Page:_	Reviewer:	2nd Reviewer.

HPLC

METHOD:

ease see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A"	Were all samples associated with a given method blank?	Was a method blank performed for each matrix and whenever a sample extraction procedure was performed?	
ease see	N/A	A/N	

Was a method blank performed with each extraction batch? Were any contaminants found in the method blanks? If yes, please see findings below. Y N N/A

	(Gasoline and
2	_
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9	>

aromatics only)Was a method blank analyzed with each 24 hour batch?

Was a method blank analyzed for each analytical / extraction batch of <20 samples?

Associated
Associated X/N/N/Y

Associated samples: Blank extraction date: Conc. units: M5/4-5

Sample Identification		1.1 /3.34 1.0/3.34				
Blank ID	7-8895050 MA	7.6.0	Andrew (Versey) was the state of the state o			
Compound	100000000000000000000000000000000000000	GRO		на достинати и потименти по потименти потимент		

Associated samples:

Blank analysis date:

Blank extraction date:

	Sample Identification							
	Blank ID			NAVO militridistribilità de procesa de Camada de Maria de Camada de Camada de Camada de Camada de Camada de Ca		economic de la companya de la compa	PARTICULAR PROPERTY OF THE PRO	
Conc. units:	Compound	pupoduo					на применення применення применення применення применення применення применення применення применення применен	

ALL CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT: All contaminants within five times the method blank concentration were qualified as not detected, "U".

SDG #: K5502499 LDC #: 135/5/B/

VALIDATION FINDINGS WORKSHEET Field Duplicates

Reviewer: Q Page: /of /

METHOD: UGC HPLC

Y N N/A Were field duplicate pairs identified in this SDG?

Y N N/A Were target compounds detected in the field duplicate pairs?

Concentration () wRPD		Concentration (m & L	mokest	%RPD	Qualification
Compound Compound Compound Concentration () %RPD Compound Concentration () %RPD	Compound		7063-R1-5B01-0-0.	Limit s	ratent only . All samples
Concentration () %RPD	9RU		2.+W		
Concentration () %RPD Limit ≤					
Concentration () %RPD					
Concentration () %RPD Limit s					од город об дена дена дена дена дена дена дена дена
Concentration () %RPD Limit s					
Concentration () %RPD Limit s					ва пописно на поделения в на поста на по
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Concentration () %RPD					
Concentration () %RPD Limit <					
Concentration ()					
	Č	Concentration	()	%RPD	Qualification Perent only / All Samples
	Compound			CM 5 5	
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					анда на при предоставления предоставления по предоста

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Ballfields Parcels at DoDHF Novato, CA

Collection Date: April 6, 2005

LDC Report Date: June 14, 2005

Matrix: Soil

Parameters: Gasoline Range Organics

Validation Level: NFESC Level III & IV

Laboratory: Columbia Analytical Services, Inc.

Sample Delivery Group (SDG): K2502505

Sample Identification

TO63-R3-SB04-0-0.5

TO63-R3-SB04-2-3**

TO63-R3-SB01-0-0.5

TO63-R3-SB01-4-5

TO63-R3-SB02-0-0.5

TO63-R3-SB03-0-0.5**

TO63-R4-SB03-0-0.5

TO63-R4-SB03-3-4

TO63-R4-SB02-0-0.5

TO63-R4-SB01-0-0.5**

TO63-R4-SB01-0-0.5MS

TO63-R4-SB01-0-0.5MSD

^{**}Indicates sample underwent NFESC Level IV review

Introduction

This data review covers 12 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 for Gasoline Range Organics.

The review follows the Final Sampling and Analysis Plan for Preliminary Assessment/Site Investigation of Ballfields Parcels at DoDHF Novato, California, (March 23, 2005) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Samples indicated by a double asterisk on the front cover underwent NFESC Level IV review. NFESC Level III review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by NFESC Level III criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0%.

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

The percent difference (%D) of the second source calibration standard were less than or equal to 15.0% for all compounds.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No gasoline range organic contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
KWG0505639-4	4/14/05	Gasoline range organics	0.94 mg/Kg	All samples in SDG K2502505

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
TO63-R3-SB04-2-3**	Gasoline range organics	1.6 mg/Kg	5.5U mg/Kg
TO63-R3-SB01-0-0.5	Gasoline range organics	1.1 mg/Kg	3.8U mg/Kg

Sample	Compound	Reported Concentration	Modified Final Concentration
TO63-R3-SB01-4-5	Gasoline range organics	0.83 mg/Kg	2.6U mg/Kg

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

V. Target Compound Identification

All target compound identifications were within validation criteria for samples on which a NFESC Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

VI. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria for samples on which a NFESC Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

VII. System Performance

The system performance was within validation criteria for samples on which a NFESC Level IV review was performed. Raw data were not evaluated for the samples reviewed by Level III criteria.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

Ballfields Parcels at DoDHF Novato, CA Gasoline Range Organics - Data Qualification Summary - SDG K2502505

No Sample Data Qualified in this SDG

Ballfields Parcels at DoDHF Novato, CA Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG K2502505

SDG	Sample	Compound	Modified Final Concentration	A or P
K2502505	TO63-R3-SB04-2-3**	Gasoline range organics	5.5U mg/Kg	Α
K2502505	TO63-R3-SB01-0-0.5	Gasoline range organics	3.8U mg/Kg	А
K2502505	TO63-R3-SB01-4-5	Gasoline range organics	2.6U mg/Kg	А

Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502505

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R3-SB04-0-0.5

Lab Code:

K2502505-001

Extraction Method:

EPA 5035/5030B

Units: mg/Kg Basis: Dry

Level: Med

Analysis Method:

8015B

				Dilution	Date	Date	Extraction	NT - 4 -
Analyte Name	Result Q	MRL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline Range Organics (GRO)	ND U	2.3	0.81	1	04/08/05	04/14/05	KWG0505639	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
4-Bromofluorobenzene	69	25-133	04/14/05	Acceptable	

Comments:

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Form 1A - Organic

SuperSet Reference:

Page 1 of 1

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Analytical Results

Client:

Battelle Memorial Institute

Project: Sample Matrix: Novato Ballfields/G486063

Soil

Service Request: K2502505 Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R3-SB04-2-3

Lab Code:

K2502505-002

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	MRL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline Range Organics (GRO)	1.6 J 5.54	5.5	1.3	1	04/08/05	04/14/05	KWG0505639	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
4-Bromofluorobenzene	56	25-133	04/14/05	Acceptable	

Comments:

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Form 1A - Organic

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SuperSet Reference: RR47285

Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502505

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R3-SB01-0-0.5

Lab Code:

K2502505-003

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

Analyte Name Gasoline Range Organics (GRO)

MRL 3.84 3.8

MDL 1.0

Dilution Factor

Date Extracted 04/08/05

Date Analyzed Extraction Note Lot

KWG0505639 04/14/05

Surrogate Name

4-Bromofluorobenzene

%Rec

64

Result Q

1.1 J

Control Limits

25-133

Date Analyzed 04/14/05

Note

Acceptable

Comments:

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Form 1A - Organic

RR47285

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1 of 1

SuperSet Reference:

Analytical Results

Client: Project: Battelle Memorial Institute Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502505 Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R3-SB01-4-5

Lab Code:

K2502505-004

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

		MADY	NATE	Dilution Factor	Date Extracted	Date Analyzed	Extraction	Note
Analyte Name	Result Q	MRL	MDL	Factor			2000	
Gasoline Range Organics (GRO)	0.83 J 2.6 U	2.6	0.82	1	04/08/05	04/14/05	KWG0505639	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
4-Bromofluorobenzene	69	25-133	04/14/05	Acceptable	

Comments:

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Form 1A - Organic

Page 1 of 1

SuperSet Reference:

RR47285

Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502505

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R3-SB02-0-0.5

Lab Code:

K2502505-005

Extraction Method: Analysis Method:

EPA 5035/5030B

8015B

Units: mg/Kg Basis: Dry

Level: Med

Dilution Date Date **Extraction** Lot Note Extracted Analyzed Result Q **MRL MDL Factor Analyte Name** KWG0505639 04/08/05 04/14/05 0.81 ND U 2.4 Gasoline Range Organics (GRO)

Control Date Limits Note %Rec Analyzed Surrogate Name 25-133 04/14/05 Acceptable 69 4-Bromofluorobenzene

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SuperSet Reference: RR47285

Analytical Results

Client:

Battelle Memorial Institute Novato Ballfields/G486063

Project: Sample Matrix:

Soil

Service Request: K2502505 Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R3-SB03-0-0.5

Lab Code:

K2502505-006

Extraction Method: Analysis Method:

EPA 5035/5030B

8015B

Units: mg/Kg Basis: Dry

Level: Med

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	MRL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline Range Organics (GRO)	ND U	2.3	0.85	1	04/08/05	04/19/05	KWG0505639	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
4-Bromofluorobenzene	80	25-133	04/19/05	Acceptable	

Comments:

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Form 1A - Organic

SuperSet Reference:

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Analytical Results

Client:

Battelle Memorial Institute

Project: Sample Matrix: Novato Ballfields/G486063

Soil

Service Request: K2502505

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R4-SB03-0-0.5

Lab Code:

K2502505-007

Extraction Method: Analysis Method:

EPA 5035/5030B

8015B

Units: mg/Kg Basis: Dry

Level: Med

				Dilution	Date	Date	Extraction	
Analyte Name	Result Q	MRL	MDL	Factor	Extracted	Analyzed	Lot	Note
Gasoline Range Organics (GRO)	ND U	2.3	0.77	1	04/08/05	04/19/05	KWG0505639	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
4-Bromofluorobenzene	73	25-133	04/19/05	Acceptable	

Comments:

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502505

Date Collected: 04/06/2005 Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R4-SB03-3-4

Lab Code:

K2502505-008

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

Extraction

Analyte Name Gasoline Range Organics (GRO) Result Q

MRL 4.4

Dilution MDL **Factor** 1.2

Date Extracted 04/08/05

Date Analyzed 04/19/05

Lot

KWG0505639

Note

Surrogate Name

Control %Rec Limits

ND U

Date Analyzed 04/19/05

Note

4-Bromofluorobenzene

73

25-133

Acceptable

Comments:

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Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502505

Date Collected: 04/06/2005 Date Received: 04/07/2005

Note

Gasoline Range Organics

Sample Name:

TO63-R4-SB02-0-0.5

Lab Code:

K2502505-009

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg Basis: Dry

Level: Med

Date **Extraction** Dilution Date Lot MRL **MDL Factor** Extracted Analyzed Result Q **Analyte Name** 04/19/05 KWG0505639 04/08/05 0.79 Gasoline Range Organics (GRO) ND U 2.6 1

Control Date %Rec Limits Analyzed Note Surrogate Name 04/19/05 25-133 Acceptable 85 4-Bromofluorobenzene

Comments:

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RR47285

Analytical Results

Client:

Battelle Memorial Institute

Project:

Novato Ballfields/G486063

Sample Matrix:

Soil

Service Request: K2502505

Date Collected: 04/06/2005

Date Received: 04/07/2005

Gasoline Range Organics

Sample Name:

TO63-R4-SB01-0-0.5

Lab Code:

K2502505-010

Extraction Method:

EPA 5035/5030B

Analysis Method:

8015B

Units: mg/Kg

Basis: Dry

Level: Med

	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Analyte Name Gasoline Range Organics (GRO)	ND U	2.4	0.77	1	04/08/05	04/19/05	KWG0505639	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note	
4-Bromofluorobenzene	81	25-133	04/19/05	Acceptable	

Comments:

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Form 1A - Organic

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	Validation Technical holding times Initial calibration Calibration verification	S.			T				ings are noted in attached
Välluati	Technical holding times Initial calibration	Area			1		_		·
	Initial calibration			1 /	†		11.1.	mments	
<u>l.</u>				-	Sampli	ling da	ites: 4/6/03	<u> </u>	
IIa.	Calibration verification			4	 	- a			
IIb.				A	165	ba	ICV		
111.	Blanks			W	 				
IVa.	Surrogate recovery			4	-				
IVb.	Matrix spike/Matrix spike du	uplicate	S	 	 	~ .			
IVc.	Laboratory control samples	;		4		05			
V.	Target compound identifica	ition		4			ed for Level III validation		
VI.	Compound Quantitation and	d CRQI	_S	₩	Not re	eviewe	ed for Level III validation	х	
VII.	System Performance			- 	Not re	eviewe	ed for Level III validation		
VIII.	Overall assessment of data	<u> </u>		<u> </u>					
IX.	Field duplicates			N	<u> </u>				
X.	Field blanks			L N_	<u></u>				
	A = Acceptable N = Not provided/applicable SW = See worksheet d Samples: ** Indicates sam		R = Rins FB = Fie	eld blank		eted	D = Duplicate TB = Trip blank EB = Equipment	tblank	
FT	TO63-R3-SB04-0-0.5	11	TO63-R4-SB0	01-0-0.5 M S		21		31	
	TO63-R3-SB04-2-3**	12	TO63-R4-SB0			22		32	
	TO63-R3-SB01-0-0.5	13	KW40509		J	23		33	
	TO63-R3-SB01-4-5	14		1	/	24		34	
	TO63-R3-SB02-0-0.5	15				25		35	
	TO63-R3-SB03-0-0.5**	16				26		36	
	T063-R4-SB03-0-0.5	17				27		37	
	TO63-R4-SB03-3-4	18				28		38	
	TO63-R4-SB02-0-0.5	19				29		39	

Notes:	

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TO63-R4-SB01-0-0.5**

VALIDATION FINDINGS CHECKLIST

LDC #: 13575C7 SDG #: 12502505 Page: /of <u>></u>
Reviewer: <u>-</u>
2nd Reviewer: <u>-</u>

Method: GC HPLC			T	
Validation Area	Yes	No	NA	Findings/Comments
Technical holding times			1	
All technical holding times were met.				
Cooler temperature criteria was met.				
II. Initial calibration			i ay	
Did the laboratory perform a 5 point calibration prior to sample analysis?				
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?				
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?				
Did the initial callbration meet the curve fit acceptance criteria?			Ĺ	
Were the RT windows properly established?	/			
IV. Continuing calibration		ı	T	T
What type of continuing calibration calculation was performed?%D or %R				
Was a continuing calibration analyzed daily?	/		-	
Were all percent differences (%D) ≤ 15%.0 or percent recoveries 85-115%?	/			
Were all the retention times within the acceptance windows?				
V. Blanks	τン	Ī	T	
Was a method blank associated with every sample in this SDG?	_		-	
Was a method blank analyzed for each matrix and concentration?	/		-	
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.				
VI. Surrogate spikes		1	Т	
Were all surrogate %R within the QC limits?		ļ	-	
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?				
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			Ľ.	
VII. Matrix spike/Matrix spike duplicates	T	T	1	T
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.				
Was a MS/MSD analyzed every 20 samples of each matrix?	1			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?				
VIII. Laboratory control samples		4-		T
Was an LCS analyzed for this SDG?	_/	4_		
Was an LCS analyzed per extraction batch?	$\perp /$			

LDC #: /3575C7 SDG #: KX50 2505

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2 Reviewer: 2 2nd Reviewer: 2

Validation Area	Yes	No	NA	Findings/Comments
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?				
X. Regional Quality Assurance and Quality Control	1		İ	
Were performance evaluation (PE) samples performed?	-			
Were the performance evaluation (PE) samples within the acceptance limits?				
X. Target compound identification	T	F	T	
Were the retention times of reported detects within the RT windows?	$\perp \angle$			
XI. Compound quantitation/CRQLs	1	17	T	Γ
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	\perp			
XII. System performance		т	-	T
System performance was found to be acceptable.	\bot			
XIII. Overall assessment of data				Tables 130
Overall assessment of data was found to be acceptable.		1		
XIV, Field duplicates				
Were field duplicate pairs identified in this SDG?		/	_	
Were target compounds idetected in the field duplicates?			/	
			**	Section 1 or 1
XV. Field blanks		17	1	
Were field blanks identified in this SDG?	-	+	\forall	
Were target compounds detected in the field blanks?				

SDG #: 43650 250 5 LDC #: 135/5 C]

VALIDATION FINDINGS WORKSHEET Blanks

Page: Zof Z Reviewer: 4 2nd Reviewer:

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questions are identified as "N/A".	
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Were all samples associated with a given method blank? N N/A N/A N/A

Was a method blank performed for each matrix and whenever a sample extraction procedure was performed?

Was a method blank performed with each extraction batch?

Were any contaminants found in the method blanks? If yes, please see findings below N/A N/A

Level IV/D Only

(Gasoline and aromatics only)Was a method blank analyzed with each 24 hour batch? KA N/A

Was a method blank analyzed for each analytical / extraction batch of <20 samples? A/N N/Y

Associated samples: Blank analysis date: 4/14/05 Blank extraction date: Conc. units: M5年8

Sample Identification 1100 8 8 1.1/3.81 m (5.5 M N v) LNE SOS 638 Blank ID Compound 6R0

	Sample Identification				
	Blank ID				
Conc. units:	Compound				

Associated samples:

Blank analysis date:

Blank extraction date:

ALL CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT: All contaminants within five times the method blank concentration were qualified as not detected, "U".

SDG #: KX0 X0 LDC#:135/5c7

Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

2nd Reviewer:_ Reviewer:_ Page:__

> FPLC METHOD: GC_

The calibration Factor (CF), average CF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

CF = A/C average CF = sum of the CF/number of standards %RSD = 100 * (S/X)

A = Area of compound, C = Concentration of compound, S = Standard deviation of the CF X = Mean of the CFs

NAME OF THE PROPERTY OF THE PR				Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
*	Standard ID	Calibration Date	Compound		(o Etal)	Average CF (initial)	Average CF (initial)	%RSD	%RSD
-		3/31/05	5 RO	8730	8730	8750	8150	4.5	4.5
2									
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4									основня водення
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Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

SDC # 752523 LDC #: 135/56/

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

oť Page: Reviewer: 2nd Reviewer:

METHOD: GC /

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

					Reported	Recalculated	Renorted	Recalculated
*	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	CF/Conc. CCV	CF/Conc. CCV	Ω%	Q%
	1 3	50/41/1	11 1	8150	2882	7980	٦	
2	2 04HR003 4/19/05	50/61/2	4PD	2518	8260	8260	<u> </u>	
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Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC#/38575C7 SDG#/2502505

VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

METHOD: GC HPLC

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found SS = Surrogate Spiked

Man

Percent Difference Recalculated Percent Recovery Reported Percent Recovery 27.77 Surrogate Found Surrogate Spiked 20 DB-625 Column/Detector Surrogate Sample ID: DAM

mple ID:

1 1 1

Sample ID:

		Surrogate	Surrogate	Percent	Percent	Percent
Surrogate	Column/Detector	Spiked	Found	Recovery	Recovery	Difference
				Reported	Recalculated	

SDG#: K>SO>SOS LDC#: 1357567

Matrix Spike/Matrix Spike Duplicates Results Verification VALIDATION FINDINGS WORKSHEET

2nd Reviewer: Page: _of _ Reviewer:_

> ၁၅ METHOD:

The percent recoveries (%R) and relative percent differences (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below

using the following calculation: %Recovery = 100 * (SSC - SC)/SA

Where

SC = Sample concentration

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

SSC = Spiked sample concentration SA = Spike added MS = Matrix spike

MSD = Matrix spike duplicate

MS/MSD samples: ////2

	Spik	9	Sample	Spike Sample	ample	Matrix spike	spike	Matrix Spike Duplicate	Duplicate	MS/MSD	SD
Compound	Added (WSAS)	T.	Conc.	Concentration	ration	Percent Recovery	ecovery	Percent Recovery	ecovery	RPD	0
	MS	MSD		MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)	9.77	49.6	NO	8,02	7.97	8	82	83	83	\ \frac{1}{2}	
Diesel (8015)			ì								Control of the Contro
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)										A THE REAL PROPERTY OF THE PARTY OF THE PART	
HMX (8330)										Management of the Control of the Con	New Parking Control of
2,4,6-Trinitrotoluene (8330)											
										NAMES OF THE PERSON OF THE PER	NAME OF THE PROPERTY OF THE PR
									THE PROPERTY OF THE PROPERTY O		OCT-OLIVO(PINA) (PINA)
			-								
										WARRANT WARRANT CONTRACTOR AND	
										· ·	
					1 6 - 11 - 2	and the second of the second communication when receipts do not acrea within	40,000,000	v oolamoo by	Popodos aod	or ob all roor	tim corpo to

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

SDG #: \(\frac{202502}{202502} \) LDC#: 1357527

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

2nd Reviewer: \varnothing Reviewer:

Page: /of

METHOD: / GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

Where

SC = Sample concentration

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

SSC = Spiked sample concertration SA = Spike added LCS = Laboratory Control Sample

LCSD = Laboratory Control Sample duplicate

FN40505639-3 LCS/LCSD samples:

	Spike	ke	Sample	Spike Sample	ample	SOT	S	CSD	δO	TCS/FCSD	csD
Compound	Adde (mis)	ied (S)	Conc, (M5/5)	Concentry (MS/	tration	Percent Recovery	ecovery	Percent Recovery	ecovery	RPD	Q
	, son	LCSD	-	SOT	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)	0/	NA	ļ	86.6	NA	sell!	100				
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)						·	·			Patricia	
Naphthalene (8310)										ment of the state	
Anthracene (8310)			-								
HMX (8330)				·							
2,4,6-Trinitrotoluene (8330)										TO COMPANY AND ADDRESS OF THE PARTY OF THE P	

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

SDG #XXXD4SDS LDC #:/8575627

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

Reviewer: 2nd Reviewer: Page:

> GC HPLC METHOD:

Were all reported results recalculated and verified for all level IV samples? Were all recalculated results for detected target compounds agree within 10% of the reported results?

(RF)(Vs or Ws)(%S/100) (A)(Fv)(Df) Concentration=

A= Area or height of the compound to be measured Fv= Final Volume of extract

RF= Average response factor of the compound in the initial calibration Df= Dilution Factor

Vs= Initial volume of the sample Ws= Initial weight of the sample %S= Percent Solid

Example:

Sample ID.

Compound Name ___

(8750)(3.92)(0.590)(1000) Concentration = (1/9423)(50)(5)

=1.58 mg/

i i	-		-	-		- T	
Qualifications		оннособительного подавання выполняться куроводення выполняться в подавання выполняться выполняться выполняться	о оприменя в применя				
Recalculated Results Concentrations (
Reported Concentrations (
Compound							
Sample ID							
*						PROFESSOR STATEMENT STATEM	

SAMPCALew.wpd

Comments: